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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

ABRAMS, NEIL

ART UNIT PAPER NUMBER

2839

DATE MAILED: 05/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/045,974

Applicant(s)

CHENG ET AL.

Examiner

Neil Abrams

Art Unit

2839

am

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 July 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-49 is/are pending in the application.
- 4a) Of the above claim(s) 1-28 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 29-49 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

Title is overlong, ^{//}soldered interfaces ^{//} and to current ^{//} could be deleted and DC aspect added.

Claims submitted as numbers 27-47 were incorrectly numbered since case originally included claims 1-28. The new claims have been renumbered as claims 29-49 and dependencies changed accordingly. Applicants should correct their copy and resubmit a new set of claims even if no other changes are made. Non-elected claims 1-28 should be cancelled.

Spec. page 1, line 7, now abandoned must be added. The cases should be listed in standard manner, formal then provisional.

Figs. 6S-6C and related spec are objected to as confusing and just what structure is disclosed is not understood. Complete revision of drawings is required.

Claims 29-49 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Just how the independent claims are intended to read on the invention is uncertain. Applicant should point out for at least claims 36, 37, 39, just how they correlate to specific features of the invention.

In addition, claim 29, line 12 ^{//}input is incorrect. Claims 31, 32, 34, 37, 38, 41, ~~42~~, 42, 44, 47, 48, all are unclear as based on features not disclosed in the spec. In spec. use of a Kapton and heat conductive material are seen to only be disclosed for parts 150, 160 ~~and~~ ^{not} for layers 125, 140, or 157, 167 see spec page 7. the recited claims 32, 42 dimensions also lack basis in the spec.

Claims 31, 32, 34, 37, 38, 41, 42, 44, 47, 48, are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The features of these claims do not find support in the disclosure as filed for reasons discussed above.

Claims 36-38 and 46-48 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Deam alone or in view of Moore, Rhoades, Winpisinger and Kuroki.

For claims 36, 46 Deam fig. 6 system includes DC source 50 and a connector with busses or conductive means 102, 104 with terminals at their ends joined to the DC source, the conductive means separated by insulation means 130. The high and low voltage features and magnetic cancellation are seen to be inherent in the Deam system with cancellation due to opposite currents in each line of the bus. While Deam alone is adequate Kuroki, col. 2, lines 20-30, Rhoades and Winpisinger all disclose cancellation or reduction of magnetic flux or inductance when currents flow in opposite directions in closely positioned conductors. Also obvious that the Deam conductor inductances would similarly cancel out or be reduced. Claims 37, 38, 47, 48 relate to obvious design choices. Use of Kaplon suggested by Moore. Other feature, should they be at issue, considered obvious variations.

Claims 29-35, and 39-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Buchter in view of Deam, Wise ~~88~~ Rymaszewski, Rimmer, Rhoades, and Moore.

Buchter fig. 7 shows a connector with input end 130 and output end 230, connection layers 50, 50, input end layers 132, 138 with insulation 144, output end layers 116, 122, insulation 128. The sets of layers 50, 50 and 132, 138 and 116, 122 are of same size and shape. The system is for joining a source to a load. The Buchter busbars, should issues arise could be formed like those of Wise at 92, 84, which are more clearly depicted.

Buchter does not disclose DC use. Rhodes, Rymaszewski, Rimmer, col. 5, lines 24-30 and Deam disclose layer bus bars or cables for DC use. Obvious to use Buchter with DC. Use of DC would lessen disturbances. For claim 30, note Buschter clip mean 40, 42. For claims 31-35, use of Kapton is typical for electrical components, see Moore, col. 2, line 55, ~~choice of~~ choice of thickness would be design matter and usual plastic is heat conducting. For other claims references similarly applied.

For Rimmer, note PCT pub. Date 4-1998.

Claims 29, 31, 32, 34, 39, 41, 42, 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over White in view of Deam, Rimmer, and Rymaszewski.

White system includes layered connector plates 14, 15 and layered input and output lines for joining a source to a load. White is not for DC. Deam, Rimmer, and Rymaszewski disclose layered strips for DC input and output. It would have been obvious to use White for DC in view of these teachings. Dc provides a more steady

voltage. While most useful for AC the White type system would also lessen discontinuities in DC use.

Claims 36-38 and 46-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over White in view of Dean, Rimmer Rymaszewski and Moore.

For claims 36, 46 White connector 22 includes first and second conductive means configured for cancellation of magnetic fields.

It would have been obvious to use the White connector 22 for DC as that would supply a more steady voltage and improved results. Such use of DC is taught by secondary references. For claims 37, 38, 47, 48, White uses insulator 10. use of Kapton suggested by Moore.

Claim 49 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rhoades in view of Deam, Rymaszewski and Winpisinger.

The Rhoades system is to a DC power supply and a connector 10 for supplying power to printed circuit boards 40. Use of such boards to support a microprocessor is standard.

Rhoads connector includes first conductive plate 12 for current (high voltage) and plates 11, 13 for return (low voltage). These plates are formed to reduce or cancel out magnetic fields, see col. 3, lines 44-53.


Should issues arise, also obvious to use a power supply as clearly shown by Deam, fig. 6 at 50 and to use busbars of only a single high and low plate in view of Rymaszewski, Winpisinger and Deam with flux cancellation further taught by Winpisinger.

Obvious that such cancellation would occur in any of the two plate systems like that of Deam.

Claim 49 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rhoades in view of Grange, Kuroki and Noda.

Rhoades discussed above. Obvious to replace 10 by a DC cable like those of Kuroki at 6 figs. 1A, 1B or one with cable cross-over as per Noda. In either case magnetic lines should cancel out. The cable could be soldered to pcb 40 in Rhodes at 45, 46 or in typical manner as in Grange.

Any inquiry concerning this communication should be directed to Neil Abrams at telephone number (571)272-2089.


NEIL ABRAMS
EXAMINER
ART UNIT 322